NFPA 58 2011 Edition vs 2020 Edition

- **One of the 2020 code changes is retroactive which means existing systems will have to meet the new code. *See § 5.9.4.1(D)(4) & (D)(5)***
- **Highlighted Code – Important Code Change or one I believe should be modified before adoption or not adopted at all.**
- **Highlighted Code – New code or modifications that are good for industry and/or consumers.**
- **Highlighted Code – Interesting new code language**

I believe the 2020 Edition of NFPA 58 will be of great benefit to the LP-Gas industry in Alabama. I see nothing in the new code that should generate total opposition to its adoption. However, I would recommend modifying the following specific sections:

- **NFPA 58 (2020) §3.3.44 Liquefied Petroleum Gas (LP-Gas) –** Any material having vapor pressure not exceeding that allowed for commercial propane that is composed predominantly of the following hydrocarbons, either by themselves (except propylene) or as mixtures: Propane, propylene, butane (normal butane or isobutane), and butylenes.

- **NFPA 58 (2020) § 4.3.3.1 –** Notification of intent to transfer LP-Gas directly from railcar to cargo tank shall be submitted to the authority having jurisdiction before the first transfer.

- **NFPA 58 (2020) § 4.3.3.2 –** The authority having jurisdiction shall have the authority to require inspection of the site or equipment for such transfer prior to the initial transfer

NFPA 58 (2020) §3.3.9 Assembly Occupancy – An occupancy (1) used for a gathering of 50 or more persons for deliberation, worship, entertainment, eating, drinking, amusement, awaiting transportation, or similar uses; or (2) used as a special amusement building, regardless of occupant load. (NFPA 101, 2018)

This is a new definition added to NFPA 58 and it comes from the 2018 edition of NFPA 101.

NFPA 58 (2011) §3.3.10 Bulk Plant – A facility where the primary function is to store LP-Gas prior to further distribution. LP-Gas is received by cargo tank vehicle, railroad tank car, or pipeline, and then distributed by portable container (package) delivery, by cargo tank vehicle, or through gas piping.

NFPA 58 (2020) §3.3.10 Bulk Plant – A facility that stores LP-Gas in containers of more than 4000 gal water capacity prior to further distribution as a liquid for use at other facilities.

This definition is much improved as it defines the number of gallons (more than 4000 gallons) that qualifies as a bulk plant.

NFPA 58 (2020) §3.3.11 Cabinet Heater – A portable unvented heater with a self-contained propane supply.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) 3.3.12 Cargo Tank. A container that is used to transport LP-Gas as liquid cargo that either is mounted on a conventional truck chassis or is an integral part of a cargo transporting vehicle. **Proposed additional language "Cargo tanks shall not be used as permanent stationary storage containers."*

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.14 Concrete Pad – a foundation consisting of solid concrete or masonry blocks, a placed concrete slab, or a poured concrete foundation.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.18 Cylinder – A portable container with a marked water capacity of 1000 lb. or less that is designed to transport and store LP-Gas.

NFPA 58 (2011) §3.3.16 Cylinder – A container designed, constructed, tested, and marked in accordance with U.S. Department of Transportation specifications, Title 49, *Code of Federal Regulations,* or in accordance with a valid DOT special permit.

I personally prefer the 2011 edition definition. Most likely changed to accommodate some foreign cylinders hitting the market.

NFPA 58 (2020) §3.3.20 Design Pressure – The maximum pressure at which the equipment or system is designed to operate.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.21 Direct Injection – A fuel injection system that delivers LP-Gas fuel through a fuel injector, directly into the combustion chamber at high pressures, as opposed to the injection of fuel into the intake manifold air flow stream, upstream of and prior to the intake valve opening.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.25 Facility Hose – A hose and its couplings permanently installed for the purpose of unloading product from cargo tank motor vehicles in nonmetered service into a bulk plant or industrial plant.

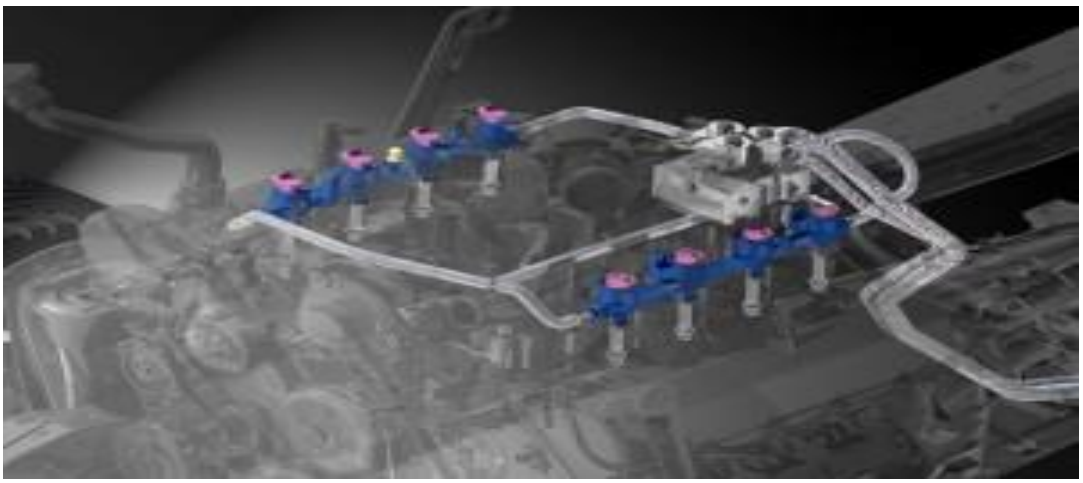
This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.28 Flexible Connector – A fixed piping system component that is fabricated from a flexible material and equipped with connections at both ends.

NFPA 58 (2011) §3.3.23 Flexible Connector – A short [not exceeding 60 in. overall length] piping system component that is fabricated from a flexible material and equipped with connections at both ends.

Note that the 60 inch limitation has been removed.

NFPA 58 (2020) §3.3.29 Fuel Rail - A manifold, pipe, or duct that connect or retains the fuel injection devices for the purpose of providing fuel supply to each injector.



This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.30 Fuel Switching Device - A component used in some direct injections systems, which is used to switch between fuels of a bifuel powered vehicle.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.38 Important Building – A building that is considered not expendable in an exposure fire. {NFPA 30,2018} (See A.6.4.1.1)

This is a new definition added between the 2011 and 2020 editions. The Appendix note is not new.

NFPA 58 (2020) §3.3.40 Industrial Plant – A facility that stores LP-Gas in containers of water capacity more than 4000 gal for use at the facility or to distribute vapor to other facilities.

This is a new definition added between the 2011 and 2020 editions. For Industrial Plants this could lead to cargo tanks being used at chicken houses with no fencing or other bulk plant requirements. We could add language that states "Cargo tanks are prohibited from being used as permanent stationary storage containers." under the definition of a cargo tank.

NFPA 58 (2020) §3.3.43 Leak Check – An operation performed on a gas piping system to verify that the system does not leak.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.44 Liquefied Petroleum Gas (LP-Gas) – Any material having vapor pressure not exceeding that allowed for commercial propane that is composed predominantly of the following hydrocarbons, either by themselves (except propylene) or as mixtures: Propane, propylene, butane (normal butane or isobutane), and butylenes.

NFPA 58 (2011) §3.3.34 Liquefied Petroleum Gas (LP-Gas) – Any material having a vapor pressure not exceeding that allowed for commercial propane that is composed predominantly of the following hydrocarbons, either by themselves or as mixtures: propane, propylene, butane (normal butane or isobutane), and butylenes.

The 2020 version eliminates the consideration of propylene as an LP-Gas unless in a mixture with one of the other products. The old definition has been around and as far back as I can find. I am not sure the reason to exclude propylene in such a fashion unless there has been some type lobbying to avoid collection of tax or fees on it as an LP-Gas. Such a change will cost the board an unknown amount of LPG fee revenue.

NFPA 58 (2020) §3.3.60 Portable Container – A container designed to transport LP-Gas

NFPA 58 (2011) §3.3.51 Portable Container – A container designed to be moved readily, as opposed to a container designed for stationary installations.

The 2020 definition is seeking to clarify that a portable container is designed to be transported with product in it.

NFPA 58 (2020) §3.3.61 Portable Storage Container – A storage container that is not used to transport LP-Gas.

3.3.61.1 Movable Fuel Storage Tender – A non-DOT specification cargo tank that is used exclusively for agricultural purposes and is commonly known as a "farm cart"

3.3.61.2 Porta-Pac – An ASME container installed on wheels with retractable landing gear that is used to store LP-Gas in temporary installations and not used to transport LP-Gas.

3.3.31.3 Skid Tank – A container that is designed and fabricated with permanently mounted skids or runners that are not designed to transport LP-Gas.

NFPA 58 (2011) §3.3.52 Portable Storage Container – A container that is designed and constructed to be moved over a highway from one usage location to another.

The 2020 edition does a good job of breaking down that a portable storage container is not used to transport gas and provides some good examples.

NFPA 58 (2020) §3.3.62 Power Supply Bushing – A sealed fitting that is installed in a container opening or multifunction valve body that seals conductors passing from the inside to the outside of the pressure vessel for the purposes of supplying electrical signals or operating voltage to electrical/electronic components located inside the pressure containment area of an ASME container.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.64 Pressure Test – An operation performed to verify the gastight integrity of piping following its installation or modification.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.76 Tank Heater – A device used to apply heat either directly to a portion of the container surface in contact with LP-Gas liquid or indirectly by circulating LP-Gas liquid from the container to the device and then back to the container.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.78.9 Purge Valve – A mechanical or electromechanical device used to permit fuel flow through the engine supply and return lines, generally on fuel injection systems, to ensure all vapor is removed from the lines prior to engine start.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §3.3.81 Vehicular Barrier Protection (VBF) – A system or method to provide physical protection for LP-Gas storage areas or installations from vehicular incursion.

This is a new definition added between the 2011 and 2020 editions.

NFPA 58 (2020) §4.2.1 LP-Gas Odorization - All LP-Gases shall be odorized prior to being loaded into a railcar or cargo tank motor vehicle by the addition of a warning agent of such character

that the gases are detectable by a distinct odor to a concentration in air of not over one-fifth the lower limit of flammability.

NFPA 58 (2011) §4.2.1 LP-Gas Odorization - All LP-Gases shall be odorized prior to delivery to a bulk plant by the addition of a warning agent of such character that the gases are detectable, by a distinct odor, to a concentration in air of not over one-fifth the lower limit of flammability.

The 2020 edition mandates odorization before LPG is loaded onto delivery vehicle instead of saying before it is delivered to a bulk plant.

NFPA 58 (2020) §4.2.2 The addition of odorant shall be documented at the point of odorization.

This is new to NFPA 58 code added sometime between the 2011 edition and the 2020 edition.

NFPA 58 (2020) §4.2.3 The presence of odorant shall be verified by sniff-testing or other means and the results documented prior to final delivery to the end-use consumer.

NFPA 58 (2011) §4.2.3 If odorization is required, the presence of the odorant shall be determined by sniff-testing or other means, and the results shall be documented as follows:

(1) When LP-Gas is delivered to a bulk plant
(2) When shipments of LP-Gas bypass the bulk plant

The 2020 edition seeks to simplify the language to state that before an end user gets LP-Gas delivered it will be tested for odorant and that testing shall be documented.

NFPA 58 (2020)
§ 4.3.3.1 – Notification of intent to transfer LP-Gas directly from railcar to cargo tank shall be submitted to the authority having jurisdiction before the first transfer.

§ 4.3.3.2 – The authority having jurisdiction shall have the authority to require inspection of the site or equipment for such transfer prior to the initial transfer

The Board modified the above in the 2011 edition adopted to read:

NFPA 58 (as adopted) §4.3.3 Notification of intent for transfer of LP-Gas directly from railcar to cargo tank shall be submitted to the authority having jurisdiction before any transfer. The authority having jurisdiction shall have the authority to require inspection of the site or equipment for such transfer prior to any transfer.

*** I recommend we stick with the 2011 adopted language.*

NFPA 58 (2020) §4.4 Qualification of Personnel

4.4.1 Persons whose duties fall within the scope of this code shall be provided with training that is consistent with the scope of their job activities and that includes proper handling and emergency response procedures.

4.4.2 Persons whose primary duties include transporting LP-Gas, transferring liquid LP-Gas into or out of stationary containers, or making stationary installations shall complete training that includes the following components:

(1) Safe work practices
(2) The health and safety hazards of LP-Gas
(3) Emergency response procedures
(4) Supervised, on-the-job training
(5) An assessment of the person's ability to perform the job duties assigned

4.4.3 Refresher Training shall be provided at least every 3 years.

4.4.4 Initial and subsequent refresher training shall be documented.

NFPA 58 (2011) §4.4 Qualification of Personnel

4.4 Persons who transfer liquid LP-Gas, who are employed to transport LP-Gas, or whose primary duties fall within the scope of this code shall be trained in proper handling procedures. Refresher training shall be provided at least every 3 years. The training shall be documented.

NFPA 58 (2020) § 4.7 Portable Fire Extinguisher – Where portable fire extinguishers are required, they shall comply with NFPA 10 and the following requirements:

(1) They shall have a minimum capacity of dry chemical with an A:B:C rating, as specified elsewhere in this code.
(2) They shall not be used to extinguish an LP-Gas pressure fire unless the source of fuel can be shut off promptly.

This is new to NFPA 58 code added sometime between the 2011 edition and the 2020 edition

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NFPA 58 (2020) §4.8 Fire Resistance Rating – Whenever a fire resistance rating is required by this code, it shall be determined in accordance with ASTM E119 *Standard Test Methods for Fire Tests of Building Construction and Materials.*

This is new to NFPA 58 code added in the 2020 edition.

NFPA 58 (2020) § 4.9 Noncombustible Material.

4.9.1 A material that complies with any of the following shall be considered a noncombustible material:

(1) A material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat.
(2) A material that is reported as passing ASTM E136, *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C.*
(3) A material that is reported as complying with the pass/fail criteria of ASTM E136 when tested in accordance with the test method and procedure in ASTM E2652, *Standard Test Method for Behavior of Materials in a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C.* *[101:4.6.13.1]*

NFPA 58 (2020) § 5.2.1.1 – Containers shall be designed, fabricated, tested, and marked in accordance with the regulations of the U.S. Department of Transportation (DOT 49 CFR); **Federal Aviation Administration (FAA 14 CFR);** the ASME *Boiler and Pressure Vessel Code,* ….

The FAA reference has been since the 2011 edition.

NFPA 58 (2020) § 5.2.2.1 – Cylinders shall be containers designed, constructed, tested, and marked in accordance with U.S. Department of Transportation specifications, Title 49, Code of Federal Regulations, or in accordance with a valid DOT special permit.

This statement has been added since the 2011 edition.

NFPA 58 (2020) § 5.2.4.5 – ASME engine fuel containers shall have a MAWP as required in Chapter 11 or Chapter 12.
Previously, this paragraph required a MAWP of 312 psig or higher. Chapters 11 & 12 allow for lower MAWP (250 psig) for some applications.

This has been revised with the 2020 edition.

NFPA 58 (2020) § 5.2.4.6 – ASME mobile containers shall be in accordance with one of the following:
(1) A MAWP of 312 psig or higher where installed in enclosed spaces of vehicles
(2) A MAWP of 312 psig where installed outside of passenger vehicles
(3) A MAWP of 250 psig where installed outside of nonpassenger vehicles

This has been added since the 2011 edition.

NFPA 58 (2020) § 5.2.9.1 – Containers for hot air balloons shall be marked to demonstrate compliance with FAA regulations.
NFPA 58 (2020) § 5.2.9.2 – Containers used in hot air balloons shall not be used for any other purpose.

Both of these statements were added in the 2017 edition.

NFPA 58 (2020) § 5.6.2 Skid Tanks. Skid tanks shall have a secure steel frame to allow transportation of the skid tank when not filled with LP-Gas.

This has been added since the 2011 edition.

NFPA 58 (2020) § 5.9.4.1(A)(3) – This paragraph changes the size of ASME tanks permitted to have an external relief valve from 100 gal or less to 125 gal or less.

NFPA 58 (2020) § 5.9.4.1 (D) – *(Summarized)* Containers more than 1000 gal up to 4000 gal with a withdrawal opening in liquid service must be equipped an internal valve or ESV with shutoff valve/excess-flow valve, fitted for remote closure and thermal activation.

In previous code editions, liquid outlets in containers of this size and service only required a shutoff valve in conjunction with an excess flow valve in the container.

NFPA 58 (2020) § 5.9.4.1(D)(4) – Remote actuation devices required *(above)* shall be located not less than 10 ft. or more than 100 ft. along a path of egress from the liquid transfer point into the container.

NFPA 58 (2020) § 5.9.4.1(D)(5) – For existing installations, the requirements in (D) shall be complied with by January 1, 2024. Retroactive

The contents of paragraph 5.9.4.1 have been added since the 2011 edition.

NFPA 58 (2020) § 5.11.3.1(8) – This section adds stainless pipe to the list of acceptable piping materials; new in the 2020 edition.

NFPA 58 (2020) § 5.20.2.1 – The maximum design pressure rating for pumps shall be based on the maximum differential pressure produced and shall be in accordance with Table 5.20.2.1.
NFPA 58 (2020) § 5.20.2.2 – Pumps that produce a differential pressure greater than 125 psi shall be marked to indicate that a bypass valve is required in the piping system.

Both statements and the referenced table have been added since the 2011 edition.

NFPA 58 (2020) § 5.20.3.2 – If a bypass valve is installed in the system, it shall have a flow capacity equal to or greater than the pump in the system at the specified pressure.
This has been added since the 2011 edition.

NFPA 58 (2020) § 5.27.1 – Vehicle fuel dispensers shall have a maximum design pressure rating equal to or greater than the maximum discharge pressure from the pump and bypass valve, if provided.

NFPA 58 (2020) § 5.27.2 – The maximum design pressure and all equipment downstream from the pump shall be in accordance with Table 5.20.2.1. This table is based on differential pressure.
Paragraph 5.27 was added in the 2017 edition.

NFPA 58 (2020) § 6.1.3 Location of Containers Not Connected for Use.

6.3.1 Cylinders awaiting use, resale, or exchange shall be stored in accordance with Chapter 8.

6.3.2 ASME containers of 4000 gal or less that have been removed from service but that contain LP-Gas shall be stored outside of buildings in accordance with either (1) or (2).

(1) Containers shall be located either at a bulk plant or in an approved area.

(2) Containers not complying with (1) shall comply with the following:
- (a) Containers shall be located in a manner that will minimize exposure to physical damage.
- (b) Containers shall be oriented so that the pressure relief valve remains in communication with the vapor space.
- (c) Containers shall not be located on roofs of buildings.
- (d) Valve outlets on ASME containers shall be plugged or capped.
- (e) Where screw-on-type caps or collars are utilized on ASME containers, they shall be in place whenever this type of container is stored regardless of the fill level of the container.
- (f) The location of the ASME containers shall comply with the "Aboveground Containers" column of Table 6.4.1.1 with respect to important buildings and lines of adjoining property that can be built upon.
- (g) Where the provisions of (f) are impractical, alternative storage locations for containers shall be approved by the authority having jurisdiction.
- (h) *This is new to NFPA 58 code added in the 2020 edition.*

NFPA 58 (2011) §6.3.11 relating to ½ distance requirement for attached structures extending more than 5 feet and less than 50 feet high has been removed in the 2020 code. Therefore, the distance from an important building would include measuring from the attached structure.

NFPA 58 (2020) Edition § 6.5.4.1 Structures such as fire walls, fences, earth or concrete barriers, and other similar structures shall be permitted around installed nonrefrigerated containers in accordance with the following:

(1) Clearance shall be provided around the container for inspection and maintenance.
(2) The structure shall be open on at least one side that includes the longest dimension of the container.
(3) The top of the container shall be capable of being wetted by an emergency response hose stream.

Modified from previous codes allowing fences with ventilation such as lattice.

NFPA 58 (2020) Edition § 6.8.1.2 LP-Gas containers or systems that are installed within 10 ft of public vehicular thoroughfares shall be provided with a means of vehicular barrier protection.

NFPA 58 (2011) Edition § 6.6.1.2 LP-Gas container or systems of which they are a part shall be protected from damage from vehicles.

Improved in the NFPA 58 2020 edition.

NFPA 58 (2020) 6.8.6.1 (C) Installation within 10ft. of a public vehicular thoroughfare or designated parking location shall be provided with vehicular barrier protection for the container's fitting housing, housing cover, container connections, and piping.

New in the NFPA 58 2020 edition.

NFPA 58 (6.11.3.3) (D) Schedule 10 steel piping shall be installed above ground and for vapor service only.

New in the NFPA 58 2020 edition.

NFPA 58 (2020) 6.11.3.5 Metallic pipe joints shall be permitted to be threaded, flanged, welded, press-connected, or brazed using pipe and fittings that comply with 5.11.3, 5.11.4, and 6.11.3.5(A) through 6.11.3.5(H).

6.11.3.5(D) (2020) Press-connected joints shall comply with ANSI/CSA 6.32 (LC4a), *Press-Connect Metallic Fittings for Use in Fuel Gas Distribution Systems.*

New in the NFPA 58 2020 edition.

NFPA 58 (2020) 6.11.3.15 Metallic piping shall be protected against corrosion in accordance with 6.11.3.15(A) through 6.11.3.15(C).

(A) Piping and tubing of 1 in. nominal diameter or smaller shall be protected by 6.19.1 or 6.19.2. (*coating, corrosion resistant material, or cathodic protection)*

(B) Piping and tubing larger than 1 in. nominal diameter and installed above ground shall be protected in accordance with 6.19.1. (*coated or corrosion resistant)*

(C) Steel piping installed underground shall have a cathodic protection system in accordance with 6.19.2(C) unless technical justification is approved by the authority having jurisdiction. (*Testing and monitoring just like underground tanks)*

New in the NFPA 58 2020 edition.

NFPA 58 (2020) 6.11.6.2 Hose shall be prohibited between the first-stage and second-stage regulators except during temporary use.

New in the NFPA 58 2020 edition.

NFPA 58 (2020) 6.13.4.1 At least one remote shutdown station for internal valves in liquid service shall be installed in accordance with the following:

(1) Not less than 25 ft or more than 100 ft from the liquid transfer point.
(2) Not less than 25 ft from the internal valves that are being controlled.
(3) Along a path of egress from the liquid transfer point.

NFPA 58 (2011) 6.11.4 At least one remote shutdown station for internal valves in liquid service shall be installed not less than 25 ft or more than 100 ft from the liquid transfer point. This requirement shall be retroactive to all internal valves required by the code.

Modified in the NFPA 58 2020 edition.

NFPA 58 (2020) 6.14.9 Where emergency shutoff valves are required to be installed in accordance with 6.14.2, a means shall be incorporated to actuate the emergency shutoff valves in the event of a break of the fixed piping resulting from a pull on the hose.

New in the NFPA 58 2020 edition.

NFPA 58 6.19.2 Except for underground and mounded containers (*see 6.8.6*), all materials and equipment that are buried or mounded shall comply with one of the requirements in 6.19.2(A) through 6.19.2(C).

(A) Materials and equipment shall be made of corrosion-resistant material that are suitable for the environment in which they will be installed.
(B) Materials and equipment shall be manufactured with a corrosion-resistant coating or have a coating applied prior to being placed into service.
(C) Materials and equipment shall have a cathodic protection system installed and maintained in accordance with 6.19.3 (*same testing requirements as underground containers)*

New in the NFPA 58 2020 edition.

NFPA 58 (2020) 6.20.2.3(C) Engines used to drive portable pumps shall be equipped with exhaust system spark arresters and shielded ignition systems.

New in the NFPA 58 2020 edition.

NFPA 58 (2020) 6.21.2.6(3) Where a facility hose is used at a LP-Gas bulk plant or industrial plant to transfer LP-Gas liquid from a cargo tank vehicle in non-metered service to a bulk plant or industrial plant, the facility hose or the facility shall be equipped with an emergency discharge control system that provides a means to shut down the flow of LP-Gas caused by the complete separation of the facility hose within 20 seconds and without the need for human intervention.

New in the NFPA 58 2020 edition.

NFPA 58 6.21.4.2

(B) The two means of emergency egress, where required, shall be at least 25 ft apart or as remotely located as is practical.

(C) Designated means of egress shall be unlocked when the enclosure is occupied or shall be opened without the need for tools, keys, or combination codes.

New in the NFPA 58 2020 edition.

NFPA 58 (2020) § 6.23.3 Cabinet Heaters This section of code would address the use of cabinet heaters in conjunction with required composite cylinders. The fact that NFPA 58 is the code approving use of such heaters would relegate their use to outdoors as this code's scope does not cover indoor use and prohibits indoor use of 20 lb. cylinders.

New in the NFPA 58 2020 edition.

NFPA 58 (2020) § 6.24.4.6 Annual Inspection

(A) Direct-type tank heaters shall be removed annually and the container surface shall be inspected.

(B) If corrosion or coating damage other than discoloration is found, the container shall be removed from service and tested in accordance with 5.2.1.2(B).

New in the NFPA 58 2020 edition.

NFPA 58 (2020) § 6.26.7.11 Gas-fired heating appliances and water heaters shall be equipped with automatic devices designed to shut off the flow of gas to the main burner and the pilot in the event the pilot flame is extinguished.

New in the NFPA 58 2020 edition.

NFPA 58 (2020) 6.27.3.14 Vehicular barrier protection (VBP) shall be provided for containers serving dispensers where those containers are located within 10 ft of a vehicle thoroughfare or parking location in accordance with 6.27.3.14(A) or 6.27.3.14(B).

(A) Concrete filled guard posts shall be constructed of steel not less than 4 in diameter with the following characteristics:

(1) Spaced not more than 4 ft between posts on center

(2) Set not less than 3 ft deep in a concrete footing of not less than 15 in diameter

(3) Set with the top of the posts not less than 3 ft above ground

(4) Located not less than 3 ft from the protected installation

(B) Equivalent protection in lieu of guard posts shall be a minimum of 3 ft in height and shall resist a force of 6000 lb applied 3 ft above the adjacent surface.

6.27.3.15 Where the dispenser is not mounted on a common base with its storage container and the dispenser is located within 10 ft of a vehicle thoroughfare, parking location, or an engine fuel filling station, the dispenser shall be provided with VBP.

New in the NFPA 58 2020 edition.

NFPA 58 (2020) 6.27.5 Fugitive Emission Requirements. Vehicle fuel dispensers shall be equipped with low-emission transfer systems in accordance with 6.30.5.

New in the NFPA 58 2020 edition.

NFPA 58 (2020) §6.30.5 Low-Emission Transfer

6.30.5.5 Transfer into a portable DOT cylinder shall meet the provisions of 6.30.5.5(A) through 6.30.5.5(F)

(A) Transfer shall only be made through a hose of nominal 1 in size or smaller.
(B) The delivery valve and nozzle combination shall not contain an interstitial volume greater than 0.24 in^3
(C) Cylinders shall be filled according to weight on a certified scale.
(D) Fixed maximum liquid level gauges shall not be used in the filling of cylinders.
(E) An overfilling prevention device shall not be used to determine when a cylinder is filled to the maximum allowable filling limit.
(F) The cylinder shall have a propane capacity of 100 lb or less.

NFPA 58 (2020) § 7.2.2.2

7.2.2.2 When noncompliance with Section 5.2 or Section 5.9 is found or it is determined in accordance with 7.2.2.7 that the container will not be filled, the container owner and user shall be notified in writing.

NFPA 58 (2011) 7.2.2.2 When noncompliance with Section 5.2 and Section 5.7 is found, the container owner and user shall be notified in writing.

NFPA 58 (2020) 7.2.2.7 Defects.

(A) Prior to filling cylinders with CGA 791 and CGA 793 connections, the face seal shall be examined for defects.
(B) If a defect on the face seal is found, the cylinder shall not be filled

This is new to NFPA 58 code added in the 2020 edition.

NFPA 58 (2020)

7.2.2.11 Cylinders required to have an overfilling prevention device (OPD) shall not be filled unless they are equipped with this device and a fixed maximum liquid level gauge.

This is new to NFPA 58 code added in the 2020 edition.

7.2.2.12 The requirements of 7.2.2.10 shall not apply to containers that comply with 5.2.9 and are included in the flight log of a hot air balloon.

7.2.2.13 Hot air balloon containers shall not be required to be removed from the aircraft for filling.

7.2.2.16 Universal cylinders shall be permitted to be filled when in the vertical position or in the horizontal position when the positioning slot is in the correct orientation.

This is new to NFPA 58 code added sometime between the 2011 edition and the 2020 edition

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NFPA 58 (2020)

7.2.3.6 From the time railroad tank cars are delivered to sidings and disconnected from the motive force for loading or unloading until they are again connected to the motive force for removal, the following shall apply:

(1) A caution sign, ……

(2) Wheel chocks shall be placed to prevent movement of the car in either direction.

(3) Access to the track shall be secured to prevent entry by other rail equipment while the car is connected for product transfer.

(4) The requirements of 7.2.3.6(2) shall not apply to movement on the siding to facilitate loading or unloading.

This is new to NFPA 58 code added sometime between the 2011 edition and the 2020 edition

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NFPA 58 (2020) § 8.4.2.3 Vehicular barrier protection (VBP) shall be provided where vehicle traffic is expected at the location, except where cylinders are protected in accordance with 8.4.2.2(2). (*metal cage)*

This is new to NFPA 58 code added sometime between the 2011 edition and the 2020 edition

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8.6 Automated Cylinder Exchange Stations

8.6.1 Cylinder exchange cabinets that include an automated vending system for exchanging cylinders shall comply with the requirements in 8.6.2 through 8.6.6.

8.6.2 Electrical equipment installed in cylinder storage compartments shall comply with the requirements for Class I, Division 2 equipment in accordance with NFPA 70.

8.6.3 Cabinets shall be designed such that cylinders can be placed inside only in the upright position.

8.6.4 Door releases for access to stored cylinders shall be permitted to be pneumatic, mechanical, or electrically powered.

8.6.5 A manual override control shall be permitted for use by authorized personnel.

8.6.6 The vending system shall not be capable of returning to automatic operation after a manual override until the system has been inspected and reset by authorized personnel.
This is new to NFPA 58 code added sometime between the 2011 edition and the 2020 edition

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Chapters 11 and 12 were separated between "Off-road vehicles" and "Over-the-Road" vehicles respectively. The following were code additions of interest:

NFPA 58 (2020) 12.3.5.4 Engine fuel systems installed after January 1, 2020, shall incorporate the fill connection of quick-connect/release Type K15 in accordance with ISO/DIS 19825, *Road vehicles – Liquefied Petroleum Gas (LPG) refuelling connector.*